

L10 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
AN 1999:227926 CAPLUS  
DN 130:229154  
TI Method for and apparatus production of carbonyl halide  
IN Freire, Francisco Jose; Keating, Kenneth Bernard; Sakata, Edward Kaoru  
PA E. I. Du Pont de Nemours & Co., USA  
SO U.S., 13 pp.  
CODEN: USXXAM

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5891319	A	19990406	US 1996-771496	19961223
PRAI	US 1996-771496		19961223		

AB Carbonyl halide is produced from carbon monoxide and halogen produced from the electrochem. conversion of anhydrous hydrogen halide. Both the oxidation of

anhydrous hydrogen halide and the formation of carbonyl halide are carried out in the anode-compartment of an electrochem. cell. This reduces the equipment and thus the capital investment necessary for carrying out these reactions. Moreover, no catalyst is needed to form halogen and subsequently make carbonyl halide, as in the prior art. In addition, the health hazards associated with making a carbonyl halide, such as phosgene, at high temps. from chlorinated hydrocarbons with atmospheric oxygen are virtually eliminated. Furthermore, the halogen produced as a result of the oxidation of anhydrous hydrogen halide are dry, thereby eliminating the need for a preheater before the halogen is reacted with carbon monoxide. Thus, with the present invention, carbonyl halide may be produced more easily, more safely and more inexpensively as compared to prior art processes.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:457916 CAPLUS

DN 131:75256

TI Process and catalysts for preparing dichlorofluoroacetyl halides from trichloroacetyl halide

IN Gavezotti, Piero; Abusleme, Julio A.; Tortelli, Vito

PA Ausimont S.p.A., Italy

SO Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 928783	A1	19990714	EP 1998-124605	19981223
	EP 928783	B1	20020828		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	IT 1298091	B1	19991220	IT 1998-MI13	19980109
	US 6166252	A	20001226	US 1999-226121	19990107
	JP 11263744	A2	19990928	JP 1999-4103	19990111
PRAI	IT 1998-MI13	A	19980109		

AB Dichlorofluoroacetyl fluoride (I) is prepared in high yield and selectivity by: (A) **fluorination** with hydrofluoric acid of trichloroacetyl halides (e.g., trichloroacetyl chloride) in a fixed or fluidized tubular-bed reactor filled with **fluorination** catalysts (e.g., Cr2O3) and having a temperature profile between the inlet of the reactants and the outlet of the reaction products of 175-275°; (B) distillation of the reaction products with trichloroacetyl fluoride recycle and recovery of a I-HF mixture; (C) separation of the I-HF mixture components by cooling at <-10° with an optional HF recycle to step A. Subsequently, the I may be converted into dichlorofluoroacetyl chloride by I hydrolysis with water followed by chlorination of the free acid with thionyl chloride in the presence of catalytic quantities of pyridine.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:87792 CAPLUS

DN 118:87792

TI The role of d functions in correlated wave functions: main group molecules

AU Magnusson, Eric

CS Dep. Chem., Univ. New South Wales, Campbell, 2600, Australia

SO Journal of the American Chemical Society (1993), 115(3), 1051-61

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

AB Large d function contributions to Hartree-Fock wave functions of S- and P-containing mols. are often cited as evidence for hypervalent spd hybridization and for violations of the octet rule. Recent work on hypercoordinate mols. invalidates this interpretation, but the possibility remains that hypervalent bonding may be facilitated by d orbital involvement in correlated wave functions. A large sample of mols. of the first- and second-row elements were studied by electronic structure theory at correlated levels and the d function contributions compared with results obtained at the Hartree-Fock level. Whether mols. are hypercoordinate or not, d functions added to the basis set provide a fairly constant 52 kJ m<sup>-1</sup> of the MP4 correlation extra energy per valence shell electron pair. The d functions in the MP4 correction to Hartree-Fock wave functions neither polarize the wave function nor act as valence d "orbitals". They are correlating functions, their effects are largely atom-centered, and their major role is to provide angular

correlation. By contrast, supplementary d functions in the Hartree-Fock part of the wave function are polarizing functions, the effects of which are concentrated in the overlap regions. The d functions in these two roles provide a computationally convenient way to remove the restrictions of the small-basis Hartree-Fock model, but neither is consistent with the idea of a valence role for d orbitals in main group mols. or of an expanded octet.

L12 ANSWER 3 OF 4 CA COPYRIGHT 2004 ACS on STN

AN 131:75256 CA

TI Process and catalysts for preparing dichlorofluoroacetyl halides from trichloroacetyl halide

IN Gavezotti, Piero; Abusleme, Julio A.; Tortelli, Vito

PA Ausimont S.p.A., Italy

SO Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 928783	A1	19990714	EP 1998-124605	19981223
	EP 928783	B1	20020828		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	IT 1298091	B1	19991220	IT 1998-MI13	19980109
	US 6166252	A	20001226	US 1999-226121	19990107
	JP 11263744	A2	19990928	JP 1999-4103	19990111
PRAI	IT 1998-MI13	A	19980109		

AB Dichlorofluoroacetyl fluoride (I) is prepared in high yield and selectivity by: (A) **fluorination** with hydrofluoric acid of trichloroacetyl halides (e.g., trichloroacetyl chloride) in a fixed or fluidized tubular-bed reactor filled with **fluorination** catalysts (e.g., Cr2O3) and having a temperature profile between the inlet of the reactants and the outlet of the reaction products of 175-275°; (B) distillation of the reaction products with trichloroacetyl fluoride recycle and recovery of a I-HF mixture; (C) separation of the I-HF mixture components by cooling at <-10° with an optional HF recycle to step A. Subsequently, the I may be converted into dichlorofluoroacetyl chloride by I hydrolysis with water followed by chlorination of the free acid with thionyl chloride in the presence of catalytic quantities of pyridine.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 4 CA COPYRIGHT 2004 ACS on STN

AN 118:87792 CA

TI The role of d functions in correlated wave functions: main group molecules

AU Magnusson, Eric

CS Dep. Chem., Univ. New South Wales, Campbell, 2600, Australia

SO Journal of the American Chemical Society (1993), 115(3), 1051-61

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

AB Large d function contributions to Hartree-Fock wave functions of S- and P-containing mols. are often cited as evidence for hypervalent spd hybridization and for violations of the octet rule. Recent work on hypercoordinate mols. invalidates this interpretation, but the possibility remains that hypervalent bonding may be facilitated by d orbital involvement in correlated wave functions. A large sample of mols. of the first- and second-row elements were studied by electronic structure theory at correlated levels and the d function contributions compared with results obtained at the Hartree-Fock level. Whether mols. are hypercoordinate or not, d functions added to the basis set provide a fairly constant 52 kJ m<sup>-1</sup> of the MP4 correlation extra energy per valence

shell electron pair. The d functions in the MP4 correction to Hartree-Fock wave functions neither polarize the wave function nor act as valence d "orbitals". They are correlating functions, their effects are largely atom-centered, and their major role is to provide angular correlation. By contrast, supplementary d functions in the Hartree-Fock part of the wave function are polarizing functions, the effects of which are concentrated in the overlap regions. The d functions in these two roles provide a computationally convenient way to remove the restrictions of the small-basis Hartree-Fock model, but neither is consistent with the idea of a valence role for d orbitals in main group mols. or of an expanded octet.

L15 ANSWER 1 OF 9 USPATFULL on STN

AN 2004:82365 USPATFULL

TI Bdellosomes

IN Fricker, Gerd, Staufen, GERMANY, FEDERAL REPUBLIC OF  
Flaig, Rudiger Marcus, Heidelberg, GERMANY, FEDERAL REPUBLIC OF

PI US 2004062815 A1 20040401

AI US 2003-312441 A1 20030804 (10)

WO 2001-EP7454 20010629

PRAI DE 2000-10030786 20000629

DE 2000-10053811 20001030

DE 2001-118312 20010411

DE 2001-118852 20010417

DT Utility

FS APPLICATION

LREP MICHAEL BEST & FRIEDRICH, LLP, 100 E WISCONSIN AVENUE, MILWAUKEE, WI,  
53202

CLMN Number of Claims: 38

ECL Exemplary Claim: 1

DRWN 7 Drawing Page(s)

LN.CNT 3296

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to solid particles for transportation of  
pharmaceutically active substances, to processes for the preparation  
thereof, to medicinal drugs containing said particles, and to the use of  
said particles for various specific indications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L15 ANSWER 2 OF 9 USPATFULL on STN

AN 2004:58236 USPATFULL

TI Preparation of 3-acyloxy-2-methylbenzoic acids

IN Scherer, Johannes, Leverkusen, GERMANY, FEDERAL REPUBLIC OF

Behre, Horst, Odenthal, GERMANY, FEDERAL REPUBLIC OF

Muller-Hauck, Friedrich, Bendorf, GERMANY, FEDERAL REPUBLIC OF

PI US 2004044243 A1 20040304

AI US 2003-458093 A1 20030610 (10)

PRAI DE 2002-10226219 20020613

DT Utility

FS APPLICATION

LREP BAYER CHEMICALS CORPORATION, PATENT DEPARTMENT, 100 BAYER ROAD,  
PITTSBURGH, PA, 15205-9741

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 548

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to an improved process for preparing  
3-acyloxy-2-methylbenzoic acids by heating substituted naphthalenes in  
the presence of alkali metal hydroxides and subsequently acylating.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L15 ANSWER 3 OF 9 USPATFULL on STN

AN 2003:319552 USPATFULL

TI Process for producing optically active 3-halogenocarboxylic acid ester  
and 3-azidocarboxylic acid ester

IN Amano, Akira, Hiratsuka-shi, JAPAN

Igarashi, Daisuke, Hiratsuka-shi, JAPAN

Miura, Takashi, Tokyo, JAPAN

PI US 2003225301 A1 20031204

AI US 2003-383866 A1 20030310 (10)

PRAI JP 2002-65728 20020311

JP 2002-103547 20020405

DT Utility  
FS APPLICATION  
LREP KUBOVCIK & KUBOVCIK, SUITE 710, 900 17TH STREET NW, WASHINGTON, DC,  
20006  
CLMN Number of Claims: 17  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1793

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for producing an optically active 3-azide-carboxylic acid ester by reacting an optically active 3-hydroxycarboxylic acid ester and a thionyl halide in the presence of a basic substance in an organic solvent to produce an optically active 3-halogenocarboxylic acid ester which is then reacted with an azide salt represented by the formula: MN.sub.3 (wherein M is an alkaline metal) in water or a mixture of water and a water soluble organic solvent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L15 ANSWER 4 OF 9 USPATFULL on STN  
AN 2002:41107 USPATFULL  
TI Process for fabricating optical fiber  
IN Mandich, Mary Louise, Martinsville, NJ, UNITED STATES  
Reents, William David, JR., Middlesex, NJ, UNITED STATES  
PI US 2002023466 A1 20020228  
AI US 2001-912129 A1 20010724 (9)  
RLI Continuation of Ser. No. US 1998-109827, filed on 2 Jul 1998, PENDING  
DT Utility  
FS APPLICATION  
LREP Docket Administrator, Lucent Technologies, Inc., Room 3J-219, 101  
Crawfords Corner Road, Holmdel, NJ, 07733-3030  
CLMN Number of Claims: 33  
ECL Exemplary Claim: 1  
DRWN 1 Drawing Page(s)  
LN.CNT 777

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fiber is drawn from a preform comprising a silica body, e.g., a sol-gel derived overcladding or substrate tube. Prior to sintering, the body is treated with a gaseous mixture containing one or more non-oxygenated sulfur halides, to **remove** and/or reduce the size of refractory oxide particles, and/or dehydroxylate the body. **Removal** of metal oxide particles or reduction in their size contributes to drawing of optical fiber exhibiting desirable strength, since such particles act as initiation sites for breakage. Advantageously, the halides include sulfur chlorides, which provide desirable improvements compared to treatment by oxygenated sulfur chlorides such as thionyl chloride (SOCl.sub.2).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

(FILE 'HOME' ENTERED AT 17:15:09 ON 26 APR 2004)

FILE 'REGISTRY' ENTERED AT 17:15:51 ON 26 APR 2004

L1	1 S PHOSGENE/CN
L2	0 S THIONYLCHLORIDE/CN
L3	1 S THIONYL CHLORIDE/CN
L4	1 S WATER/CN

FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 17:16:40 ON 26 APR 2004

L5	331 S L1 AND L4
L6	234 S L3 AND L4
L7	27 S L5 AND FLUORIN?
L8	32 S L6 AND FLUORIN?
L9	10 S L7 AND HYDROGEN FLUORIDE
L10	5 DUP REM L9 (5 DUPLICATES REMOVED)
L11	32 S L8 NOT L10
L12	4 S L11 AND HYDROGEN FLUORIDE
L13	11 S L11 AND REMOV?
L14	10 DUP REM L13 (1 DUPLICATE REMOVED)
L15	9 S L14 NOT L12

L17 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1990:83178 CAPLUS  
 DN 112:83178  
 TI Reportable quantity adjustments; delisting of ammonium thiosulfate  
 CS United States Environmental Protection Agency, Washington, DC, 20460, USA  
 SO Federal Register (1989), 54(155), 33426-84, 14 Aug 1989  
 CODEN: FEREAC; ISSN: 0097-6326  
 DT Journal  
 LA English  
 AB Under the Federal Comprehensive Environmental Response, Compensation, and Liability Act, the EPA is promulgating final reportable quantities (RQ) for 258 hazardous substances and hazardous waste streams. NH<sub>4</sub> thiosulfate is **removed** from the list of hazardous substances since the median lethal concentration is well above 500 mg/L for aquatic toxicity. Also included in this final rule is replacement of the registered trademark Gelthane with the generic name difocal, as several companies manufacture this substance.

L17 ANSWER 2 OF 10 USPATFULL on STN  
 AN 2002:133183 USPATFULL  
 TI Method for **removing** a halogen series gas  
 IN Hirano, Hachiro, Tokyo, JAPAN  
 Mori, Yoichi, Kitakyushu-shi, JAPAN  
 Kawabe, Yoshikatsu, Ama-gun, JAPAN  
 PA Asahi Glass Company, Limited, Tokyo, JAPAN (non-U.S. corporation)  
 PI US 2002068032 A1 20020606  
 US 6685901 B2 20040203  
 AI US 2001-986587 A1 20011109 (9)  
 PRAI JP 2000-343696 20001110  
 JP 2001-124231 20010423  
 JP 2001-124232 20010423  
 JP 2001-202977 20010704  
 JP 2001-198649 20010629  
 DT Utility  
 FS APPLICATION  
 LREP OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755  
 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202  
 CLMN Number of Claims: 18  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 976

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for **removing** a halogen series gas, which comprises bringing a halogen series gas comprising a halogen element or a halogen compound into contact with a granulated product, wherein the granulated product is obtained by granulating a powder of a hydrogencarbonate having a mean particle diameter of primary particles of from 10 to 500  $\mu$ m, and has a mean particle diameter of from 0.5 to 20 mm and an average hardness as defined below:

in a case where the granulated product has a mean particle diameter of at least 0.5 mm and less than 1.0 mm, the average hardness of granulated product particles having particle diameters of at least 0.5 mm and less than 1.0 mm is at least 1 N;

in a case where the granulated product has a mean particle diameter of at least 1.0 mm and less than 1.5 mm, the average hardness of granulated product particles having particle diameters of at least 1.0 mm and less than 1.5 mm is at least 4 N;

in a case where the granulated product has a mean particle diameter of at least 1.5 mm and less than 2.0 mm, the average hardness of granulated product particles having particle diameters of at least 1.5 mm and less



than 2.0 mm is at least 10 N; and

in a case where the granulated product has a mean particle diameter of from 2.0 mm to 20 mm, the average hardness of granulated product particles having particle diameters of at least 2.0 mm is at least 30 N.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 3 OF 10 USPATFULL on STN  
AN 2001:134309 USPATFULL  
TI Process for the preparation of 3,5-bis(trifluoro-methyl)-benzoyl chlorides and novel 3,5-bis(tri-halogenomethyl)-and 3,5-dimethylbenzoyl halides  
IN Marhold, Albrecht, Leverkusen, Germany, Federal Republic of  
Stolting, Jorn, Koln, Germany, Federal Republic of  
PI US 2001014759 A1 20010816  
US 6420601 B2 20020716  
AI US 2001-769797 A1 20010125 (9)  
PRAI DE 2000-10004717 20000203  
DT Utility  
FS APPLICATION  
LREP BAYER CORPORATION, PATENT DEPARTMENT, 100 BAYER ROAD, PITTSBURGH, PA, 15205  
CLMN Number of Claims: 12  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 419

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB 3,5-Bis(trifluoromethyl)benzoyl chlorides optionally substituted with **fluorine** or chlorine are advantageously prepared by converting 3,5-dimethylbenzoic acids optionally substituted with **fluorine** or chlorine into the corresponding acid chlorides; completely free-radically chlorinating said chlorides in the side chains, giving 3,5-bis(trichloromethyl)benzoyl chlorides optionally substituted by **fluorine** or chlorine; **fluorinating** the latter with anhydrous hydrogen fluoride and/or antimony pentafluoride, giving 3,5-bis(trifluoromethyl)benzoyl fluorides optionally substituted with **fluorine** or chlorine; and then reacting the 3,5-bis(trifluoromethyl)benzoyl fluorides with silicon tetrachloride in the presence of a further Lewis acid. Some of the 3,5-bis(trihalogenomethyl) and 3,5-dimethylbenzoyl halides which arise as intermediates are novel compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 4 OF 10 USPATFULL on STN  
AN 1998:1264 USPATFULL  
TI Fluid storage and delivery system comprising high work capacity physical sorbent  
IN Tom, Glenn M., New Milford, CT, United States  
McManus, James V., Danbury, CT, United States  
Olander, W. Karl, Tampa, FL, United States  
PA Advanced Technology Materials, Inc., Danbury, CT, United States (U.S. corporation)  
PI US 5704967 19980106  
AI US 1996-650633 19960520 (8)  
RLI Continuation-in-part of Ser. No. US 1995-322224, filed on 13 Oct 1995, now patented, Pat. No. US 5518528  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Spitzer, Robert  
LREP Hultquist, Steven J., Elliott, Janet R.  
CLMN Number of Claims: 26  
ECL Exemplary Claim: 1

DRWN 8 Drawing Figure(s); 8 Drawing Page(s)

LN.CNT 1562

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An adsorption-desorption apparatus, for storage and dispensing of a sorbable gas, wherein a physical sorbent medium bearing the adsorbed gas to be selectively dispensed is delivered by pressure differential desorption and/or thermal desorption of the sorbate gas from the sorbent material. The sorbent material preferably comprises a material which is characterized by a Sorbent Working Capacity, measured for arsine at 40 Torr and at 650 Torr, of at least 50 grams arsine per liter of bed of the sorbent material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 5 OF 10 USPATFULL on STN

AN 96:25081 USPATFULL

TI Process for the preparation of 2-halogeno-pyridine derivatives

IN Rivadeneira, Eric, Leverkusen, Germany, Federal Republic of

Jelich, Klaus, Wuppertal, Germany, Federal Republic of

PA Bayer Aktiengesellschaft, Leverkusen, Germany, Federal Republic of  
(non-U.S. corporation)

PI US 5502194 19960326

AI US 1994-220620 19940331 (8)

RLI Continuation-in-part of Ser. No. US 1994-205121, filed on 28 Feb 1994  
which is a continuation-in-part of Ser. No. US 1993-15715, filed on 9  
Feb 1993, now abandoned

PRAI DE 1992-4204920 19920219

DE 1992-4212595 19920415

DE 1993-4311247 19930406

DT Utility

FS Granted

EXNAM Primary Examiner: Rotman, Alan L.

LREP Sprung Horn Kramer & Woods

CLMN Number of Claims: 4

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 520

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for the preparation of a 2-halogeno-pyridine of the formula  
##STR1## in which X represents halogen and

Y represents halogen, nitro, formyl, cyano, carboxyl, carbamoyl, alkyl,  
halogenoalkyl, alkoxyalkyl, dialkoxyalkyl, alkoxycarbonyl,  
alkylaminocarbonyl or dialkylaminocarbonyl,

which comprises in a first stage reacting a pyridine 1-oxide of the  
formula ##STR2## with an organic nitrogen base A and an electrophilic  
compound, optionally in the presence of a diluent, to produce a compound  
of the formula ##STR3## in which A represents the radical of an organic  
nitrogen base, and

Z.sup.- represents an anion formed from an electrophilic compound,

optionally isolating and optionally purifying the compound of the  
formula (III).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 6 OF 10 USPATFULL on STN

AN 95:82430 USPATFULL

TI **Fluorinated** methyl ethers

IN Krespan, Carl G., Wilmington, DE, United States

Rao, V. N. Mallikarjuna, Wilmington, DE, United States

PA E. I. Du Pont de Nemours and Company, Wilmington, DE, United States  
(U.S. corporation)

PI US 5449837 19950912

AI US 1994-299129 19940902 (8)

RLI Division of Ser. No. US 1993-85843, filed on 30 Jun 1993, now patented,  
Pat. No. US 5382704

DT Utility

FS Granted

EXNAM Primary Examiner: Richter, Johann; Assistant Examiner: Peabody, John

CLMN Number of Claims: 4

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 477

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for producing a **fluorinated** ether of the formula R.sub.2 CHOCF.sub.2 A, where A is Cl or F, and each R is H, (CF.sub.2).sub.n Cl, (CF.sub.2).sub.n F or (CF.sub.2).sub.n H (n is an integer from 1 to 10) by reacting a first reactant of the formula R.sub.2 CHOY where Y is H, COF, COCl or COOCHR.sub.2 (R is as defined above), a second reactant selected of the formula CZ.sub.2 Cl.sub.2 or COZ.sub.2 where each Z is independently Cl or F (provided that when A is Cl, the second reactant is CZ.sub.2 Cl.sub.2), and HF; and recovering the **fluorinated** ether from the reaction products. Also disclosed are bis-ethers of the formula (CF.sub.3 (CF.sub.2).sub.m).sub.2 CHOCF.sub.2 OCH (CF.sub.2).sub.m CF.sub.3).sub.2, where m is an integer of 0 to 3, which can also be produced by the process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 7 OF 10 USPATFULL on STN

AN 95:13363 USPATFULL

TI Method for continuously recovering metals using a dual zone chemical reactor

IN Bronson, Mark C., Livermore, CA, United States

PA The United States of America as represented by the United States  
Department of Energy, Washington, DC, United States (U.S. government)

PI US 5389123 19950214

AI US 1993-87549 19930708 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Mai, Ngoclan T.

LREP Sartorio, Henry, Gaither, Roger S., Moser, William R.

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN 6 Drawing Figure(s); 6 Drawing Page(s)

LN.CNT 481

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dual zone chemical reactor continuously processes metal-containing materials while regenerating and circulating a liquid carrier. The starting materials are fed into a first reaction zone of a vessel containing a molten salt carrier. The starting materials react to form a metal product and a by-product that dissolves in the molten salt that flows to a second reaction zone in the reaction vessel. The second reaction zone is partitioned from, but in fluid communication with, the first reaction zone. The liquid carrier continuously circulates along a pathway between the first reaction zone and the second reaction zone. A reactive gas is introduced into the second reaction zone to react with

the reaction by-product to generate the molten salt. The metal product, the gaseous waste products, and the excess liquid carrier are **removed** without interrupting the operation of the reactor. The design of the dual zone reactor can be adapted to combine a plurality of liquid carrier regeneration zones in a multiple dual zone chemical reactor for production scale processing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 8 OF 10 USPATFULL on STN  
AN 95:6046 USPATFULL  
TI **Fluorinated** methyl ethers  
IN Krespan, Carl G., Wilmington, DE, United States  
Rao, V. N. Mallikarjuna, Wilmington, DE, United States  
PA E. I. Du Pont de Nemours and Company, Wilmington, DE, United States  
(U.S. corporation)  
PI US 5382704 19950117  
AI US 1993-85843 19930630 (8)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Mars, Howard T.  
CLMN Number of Claims: 12  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 503

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is disclosed for producing a **fluorinated** ether of the formula  $R_{sub.2}CHOFR_{sub.2}A$ , where A is Cl or F, and each R is H,  $(CF_{sub.2})_{sub.n}Cl$ ,  $(CF_{sub.2})_{sub.n}F$  or  $(CF_{sub.2})_{sub.n}H$  (n is an integer from 1 to 10) by reacting a first reactant of the formula  $R_{sub.2}CHOY$  where Y is H, COF, COCl or  $COOCHR_{sub.2}$  (R is as defined above), a second reactant selected of the formula  $CZ_{sub.2}Cl_{sub.2}$  or  $COZ_{sub.2}$  where each Z is independently Cl or F (provided that when A is Cl, the second reactant is  $CZ_{sub.2}Cl_{sub.2}$ ), and HF; and recovering the **fluorinated** ether from the reaction products. Also disclosed are bis-ethers of the formula  $(CF_{sub.3}(CF_{sub.2})_{sub.m})_{sub.2}CHOFR_{sub.2}OCH(CF_{sub.2})_{sub.m}CF_{sub.3})_{sub.2}$ , where m is an integer of 0 to 3, which can also be produced by the process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 9 OF 10 USPATFULL on STN  
AN 92:14795 USPATFULL  
TI Preparation of anhydrous niobium and tantalum pentafluorides  
IN Nappa, Mario J., Newark, DE, United States  
PA E. I. Du Pont de Nemours and Company, Wilmington, DE, United States  
(U.S. corporation)  
PI US 5091168 19920225  
AI US 1990-567815 19900815 (7)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Niebling, John; Assistant Examiner: Bolam, Brian M.  
LREP Stevenson, Robert B., Boyer, Michael K.  
CLMN Number of Claims: 12  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 449

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of producing an anhydrous niobium or tantalum pentafluoride involving reacting the corresponding pentoxide or oxyhalide with an excess of anhydrous hydrogen fluoride in the presence of a sufficient dehydrating agent (e.g.,  $COCl_{sub.2}$ ,  $SOCl_{sub.2}$  or  $SO_{sub.2}Cl_{sub.2}$ ) to react with any **water** formed. Such a process is useful to

produce a catalytically active anhydrous niobium or tantalum pentafluoride in essentially a single liquid phase reaction step.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 10 OF 10 USPATFULL on STN  
AN 89:67239 USPATFULL  
TI Process for the preparation of ultrapure heavy metal fluorides  
IN Pastor, Ricardo C., Manhattan Beach, CA, United States  
Gorre, Luisa E., Oxnard, CA, United States  
PA Hughes Aircraft Company, Los Angeles, CA, United States (U.S. corporation)  
PI US 4857293 19890815  
AI US 1987-109360 19871015 (7)  
RLI Continuation of Ser. No. US 1984-686773, filed on 27 Dec 1984, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Doll, John; Assistant Examiner: Russel, Jeffrey Edwin  
LREP Denson-Low, Wanda K.  
CLMN Number of Claims: 7  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 574

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides a method for the preparation of ultrapure active metal fluorides of increased purity from their metal oxides by reacting an active metal with a predetermined amount of HF(aq) to form a solid reaction product which is dried under controlled heating to form a hydrated fluoride. This hydrated active metal fluoride is then subjected to reactive atmosphere processing comprising hydrofluoric acid vapor in a CO.sub.2 reactive carrier gas and a selected halide compound in the gas phase for a predetermined period of time to further increase anion purity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>

L24 ANSWER 9 OF 18 USPATFULL on STN  
AN 94:97239 USPATFULL  
TI Removal of water from a phosgene recycle stream  
IN Schwarz, Hans V., Baton Rouge, LA, United States  
Brunner, Erwin, Weinheim, Germany, Federal Republic of  
PA BASF Corporation, Parsippany, NJ, United States (U.S. corporation)  
PI US 5362399 19941108  
AI US 1992-998491 19921230 (7)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Cintins, Ivars  
LREP Carmen, Dennis V.  
CLMN Number of Claims: 15  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 374

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a process for **removing water** traces from a liquid phosgene stream in chemical processes which employ a phosgenation step. Water traces are removed from a liquid phosgene stream containing at least 60 weight percent phosgene by contacting the stream with a strongly basic macroreticular anion exchange resin which catalyzes the reaction between phosgene and the water traces.

L24 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

AN 1985:423032 CAPLUS

DN 103:23032

TI Anion exchanger and method for **removing water** from  
phosgene-containing organic solvents

IN Gallus, Manfred; Lange, Peter Michael; Mitschker, Alfred; Mueller, Hans  
Juergen; Wollweber, Hans Joachim

PA Bayer A.-G. , Fed. Rep. Ger.

SO Ger. Offen., 25 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 3333720	A1	19850328	DE 1983-3333720	19830917
	DE 3333720	C2	19870820		
PRAI	DE 1983-3333720		19830917		

AB An organic solvent containing phosgene [75-44-5] and water is  
contacted with an anion exchanger which catalyzes the reaction of phosgene  
with water to give CO<sub>2</sub> and HCl, giving a water-free solvent suitable for  
recycle in the phosgenation of amines to give isocyanates. The anion  
exchanger is an aminomethylated crosslinked styrene polymer or a  
quaternized derivative prepared from the polymer and a compound such as  
2,6-dichlorobenzyl chloride (I). Thus, o-dichlorobenzene (II) [95-50-1]  
containing 2.8% phosgene and 85 ppm H<sub>2</sub>O was passed through a column containing

an

anion exchanger prepared by quaternizing an aminomethylated  
divinylbenzene-styrene copolymer with I. The II obtained from the column  
contained no H<sub>2</sub>O.

L33 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1995:255547 CAPLUS  
 DN 122:109939  
 TI Reactive **removal** of **water** from a phosgene recycle  
 stream in phosgenation reactions  
 IN Schwarz, Hans V.; Brunner, Erwin  
 PA BASF Corp., USA  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5362399	A	19941108	US 1992-998491	19921230
PRAI	US 1992-998491		19921230		

AB Water traces are removed from a liquid phosgene stream containing  $\geq 60$  weight% phosgene by contacting the stream with a strongly basic macroreticular anion exchange resin which catalyzes the reaction between phosgene and water. The liquid phosgene stream results from manufacturing an isocyanate with phosgene in the presence of a solvent, removing gaseous phosgene from the isocyanate and solvent, liquefying the gaseous phosgene to form said liquid phosgene stream. The liquid phosgene stream is contacted with a macroreticular strongly basic anionic exchange resin (e.g., Amberlyst A 26) having a quaternary ammonium group attached to a crosslinked copolymer through a methylene group  $-[C_6H_4-CH_2N(R)_2R+A-]$  where each R is sep. a substituted or unsubstituted C1-22 alkyl or alkenyl group, and A- is a halide, hydroxide, or alcoholate.

L33 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1994:511939 CAPLUS  
 DN 121:111939  
 TI **Removal** of **water** in the purification of chlorphenesin  
 carbamate  
 IN Kishimoto, Atsumi; Kumashiro, Mitsugi; Katsura, Tadashi  
 PA Sumika Fine Chemicals Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06049017	A2	19940222	JP 1992-223371	19920729
PRAI	JP 1992-223371		19920729		

AB Water in the title compound (I) is azeotropically stripped in the presence of  $\geq 1$  stabilizer selected from salts of Fe, Ni, Co, Cu, and Zn and  $NH_4$  salts of mineral acids. Thus, a mixture of I 40,  $H_2O$  10, toluene 200, and  $Fe_2(NH_4)_3$  0.04 g was heated with azeotropic removal of the  $H_2O$ , mixed with 6 g MeOH, heated with 1 g activated carbon and 1.5 g celite at  $80-85^\circ$ , filtered, and cooled to give crystals containing 99.98% I free of isomerization and decomposition products.

L33 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1994:80837 CAPLUS  
 DN 120:80837  
 TI **Water** decomposing agent, decomposition and **removal** of  
**water** in air and **water** adsorbed in the surface of  
 materials, and apparatus therefor  
 IN Tadenuma, Katsuyoshi  
 PA Tadenuma Katsuyoshi, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF



DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05213604	A2	19930824	JP 1991-177299	19910622
PRAI	JP 1991-177299		19910622		

AB Cl-containing silane compds. are used as the H<sub>2</sub>O decomposing agent. The agent decomps. H<sub>2</sub>O in air or adsorbed into the material surface to volatile substances. In examples, Me<sub>2</sub>SiCl<sub>2</sub>, Me<sub>2</sub>CCl<sub>2</sub>, B<sub>2</sub>H<sub>6</sub>, and COCl<sub>2</sub> were used as the H<sub>2</sub>O decomposing agent. The apparatus for decomposition-removal of H<sub>2</sub>O is also described.

L33 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1973:97115 CAPLUS

DN 78:97115

TI **Removal of water** from recycled gases in the manufacture of organic cyanates by reaction of phosgene with amines

IN Mason, Roger Stuttard; Thorpe, David

PA Imperial Chemical Industries Ltd.

SO Ger. Offen., 15 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2233036	A1	19730125	DE 1972-2233036	19720705
	GB 1397546	A	19750611	GB 1971-31416	19720622
	BE 785638	A1	19721229	BE 1972-119326	19720629
	IT 968398	A	19740320	IT 1972-26466	19720630
	FR 2144759	A1	19730216	FR 1972-24119	19720704
	NL 7209380	A	19730109	NL 1972-9380	19720705
PRAI	GB 1971-31416		19710705		

AB H<sub>2</sub>O, causing losses and contamination of the isocyanates and corrosion damage to apparatus, was removed from recycle gases containing PhCl or o-Cl<sub>2</sub>C<sub>6</sub>H<sub>4</sub>

(solvent) and COCl<sub>2</sub> by passing the gases through a bed containing active C or anhydrous CaSO<sub>4</sub> (Drierite) as catalysts for a reaction between COCl<sub>2</sub> and H<sub>2</sub>O at temps. above the b.p. of the solvents. Thus, a mixture containing COCl<sub>2</sub> 50, PhCl 100, and N (containing 2 + 104 volume ppm H<sub>2</sub>O) 50 ml/min was passed through Drierite 64 hr at 110° to give a mixture containing 40 volume ppm H<sub>2</sub>O. Mild steel immersed in the condensate of this mixture at 100° showed negligible corrosion, compared with a corrosion rate 10 mm/year for a gas mixture not treated with Drierite.

L33 ANSWER 5 OF 5 CA COPYRIGHT 2004 ACS on STN

AN 103:23032 CA

TI Anion exchanger and method for **removing water** from phosgene-containing organic solvents

IN Gallus, Manfred; Lange, Peter Michael; Mitschker, Alfred; Mueller, Hans Juergen; Wollweber, Hans Joachim

PA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 25 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3333720	A1	19850328	DE 1983-3333720	19830917
	DE 3333720	C2	19870820		
PRAI	DE 1983-3333720		19830917		

AB An organic solvent containing phosgene [75-44-5] and water is contacted with an anion exchanger which catalyzes the reaction of phosgene with water to give CO<sub>2</sub> and HCl, giving a water-free solvent suitable for recycle in the phosgenation of amines to give isocyanates. The anion exchanger is an aminomethylated crosslinked styrene polymer or a quaternized derivative prepared from the polymer and a compound such as 2,6-dichlorobenzyl chloride (I). Thus, o-dichlorobenzene (II) [95-50-1] containing 2.8% phosgene and 85 ppm H<sub>2</sub>O was passed through a column containing an anion exchanger prepared by quaternizing an aminomethylated divinylbenzene-styrene copolymer with I. The II obtained from the column contained no H<sub>2</sub>O.

(FILE 'HOME' ENTERED AT 16:30:18 ON 26 APR 2004)

FILE 'STNGUIDE' ENTERED AT 16:30:23 ON 26 APR 2004

FILE 'HOME' ENTERED AT 16:30:27 ON 26 APR 2004

FILE 'REGISTRY' ENTERED AT 16:30:33 ON 26 APR 2004

L1 STRUCTURE UPLOADED  
L2 50 S L1  
L3 37861 S L1 FUL

FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 16:31:16 ON 26 APR 2004

L4 5474709 S WATER  
L5 122 S L2  
L6 15 S L4 AND L5  
L7 6 S L6 AND FLUORIN?  
L8 4 DUP REM L7 (2 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 16:34:50 ON 26 APR 2004

L9 1020 S PHOSGENE  
L10 1 S PHOSGENE/CN  
L11 1 S HYDROGEN FLUORIDE/CN

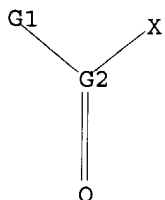
FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 16:36:25 ON 26 APR 2004

L12 2854 S L4 AND L10  
L13 60 S L12 AND L11  
L14 30 S L13 AND FLUORIN?  
L15 11 S L14 AND REMOV?  
L16 10 DUP REM L15 (1 DUPLICATE REMOVED)  
L17 10 S L16 NOT L8  
L18 15897 S REMOVING WATER  
L19 21 S L18 AND L10  
L20 21 S L19 NOT L17  
L21 0 S L20 AND L11  
L22 0 S L21 AND FLUORIN?  
L23 1 S L20 AND FLUORIN?  
L24 18 DUP REM L20 (3 DUPLICATES REMOVED)  
L25 0 S L24 AND REACTIVE AGENT  
L26 28705 S REMOV? (S) WATER/TI  
L27 1143632 S WATER/TI  
L28 0 S L26 AND L2  
L29 11 S L26 AND L10  
L30 9 S L29 NOT L24  
L31 9 S L30 NOT L17  
L32 5 DUP REM L31 (4 DUPLICATES REMOVED)  
L33 5 S L32 NOT L8

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 H, X, Ak

G2 C, S